Measuring Rural Poverty in China: a Case Study Approach
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The resource person is a visiting professor to the China Agricultural University, but not part of the team for this proposed research project. His involvement will be entirely voluntary without any financial implication on the project.
Measuring Rural Poverty in China: a Case Study Approach

Abstract: This research intends to use rural household survey data from three different provinces in China, Inner Mongolia, Gansu and Hubei. Data will be collected from the rural survey teams of the provincial statistical bureaux for the latest 7 years. The purpose is to calculate provincial poverty lines and their changes over time, to measure poverty, to derive and decompose the inequality index, to explain the characteristics of poverty between different types of regions, and to identify the key determinants of poverty both the regional and individual household levels. In addition, we also aim to conduct poverty dominance analysis so that poverty can be compared between regions, over time and among different groups of population. Poverty will also be decomposed into its growth and distribution components in order to study the effects of income growth and rising inequality on poverty variations over time. Special attention will be paid to the poverty situation of women and children and policy design that may benefit most the reduction of poverty in rural China. It is expected that the proposed project will greatly improve the team working ability, and hence the research capacity of the research institution and individual researchers, especially the young and female researchers.

1. Research questions and objectives

The most basic issue of poverty study is the measurement of poverty. This is also true in China. Fast economic growth in the last quarter century has improved people’s living standards significantly. Per capita GDP rose over six folds and per capita rural income more than quadrupled. There is no doubt that poverty in China must have declined substantially as a result of rising average income. However, the exact extent of rural poverty is highly debatable, depending on which poverty line is used for measurement.
Currently there are three main sources of poverty measurement for China. The first measurement is
the standard international poverty line of $1/day (in 1990 prices) per person recommended by the
World Bank. The second measurement is the official poverty line defined by the Chinese
government at 637 yuan/year (at current 2003 prices) per person. The third measurement is provided
by a number of independent researchers. Table 1 lists a few estimates of poverty incidence for rural
China in some selected years.

<table>
<thead>
<tr>
<th>Estimates by</th>
<th>Poverty Line</th>
<th>Number of poor (million)</th>
<th>As % of rural population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. World Bank (2004 for 2000)</td>
<td>$1.08/day</td>
<td>361</td>
<td>38.8</td>
</tr>
<tr>
<td>B. Chinese official (2003)</td>
<td>637 yuan/year</td>
<td>30</td>
<td>3.2</td>
</tr>
<tr>
<td>Chinese official (1995)</td>
<td>540 yuan/year</td>
<td>61</td>
<td>7.1</td>
</tr>
<tr>
<td>C. Independent researchers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: World Bank (2004); New Beijing Daily, 2004 (for official estimate in 2003); Khan, 1999 (Khan’s own estimate and the official estimate for 1995); Yao (2004), Table 9.12.

The official estimates are substantially lower than any of all the other estimates, primarily due to the
use of a much lower poverty line. The government acknowledged that apart from the 30 million
absolute poor in 2003, there were another 60 million low income rural people (882 yuan/year per
head) who were highly vulnerable to poverty (New Beijing Daily, 2004). The estimate by the World
Bank is substantially higher than both the official and independent estimates because they use an
arbitrary international poverty line without considering the actual purchasing power of $1/day in
rural China. The estimates by Khan (1999) and Yao (2004) are both based on the international
poverty line adjusted by the actual purchasing power of $1/day in rural China. As a result, their
estimates are significantly lower than that by the World Bank, but still substantially higher than the
official figures.
The estimates in Table 1 are subject to a common important drawback because they use the same poverty line for the whole country. Poverty incidence must have been underestimated in the rich provinces and overestimated in the poor regions because the prices of food and other daily necessities are usually positively related with per capita incomes.

Based on the above discussion, there are a few important questions that need to be answered.

- What is the real level of poverty in rural China?
- Why are the official estimates so much lower than the estimates by the World Bank and independent researchers?
- What should be the realistic poverty line for each region and how is this compared to the official poverty line?
- What are the main determinants of rural poverty?
- How can poverty variations be decomposed into its income growth and distribution components?
- How to compare poverty distribution between two regions or over time?
- Are women and children more vulnerable to poverty than men, and why?

The objective of this research is to find answers to these questions through a systematic study using household level data from three different provinces, two of which are among the poorest and one is a typical middle income province. At the time of revising this proposal, we have acquired rural household survey data of Hubei for the years 1997-2003 (3,300 households and 1,500 variables each year). With data from Hubei, we have started to do some preliminary work on poverty measurement and hope that data from the other two provinces will be obtained in the same format once this project is formally started.
2. Scientific contribution of the research, including key references and knowledge gaps

There are many studies on rural poverty in China. Based on the National Bureau of Statistics (NBS) rural household survey data of four southern provinces, Guangdong, Guangxi, Yunnan, and Guizhou, over 1985-1990, Jalan and Ravallion (1998a) assess the impact of China's poor-area development programmes. They find that households in the targeted poor areas have significant higher rates of consumption growth than one would have expected, though still not enough to reverse their longer-term divergence from other areas. Without controlling for spatial externalities, the growth process entails a sizable underestimation of the welfare gain from the programme. Jalan and Ravallion (1998b, 2000) further investigate the issue of transient poverty in rural China. They find considerable transient poverty. One-half of the mean squared poverty gap and over one-third of the mean poverty gap is accounted for by year-to-year fluctuations in consumption.

Based on the assumption of subsistence intake and income data from NBS, the World Bank (1997) and Yao (2000) conclude that poverty declined sharply during 1978-1985 but the incidence of poverty hardly changed and became sensitive as to how incomes were estimated in the following decade. Riskin (1994), Gustafsson and Li (1998), Riskin and Li (2001), Gustafsson and Wei (2000) use rural household income survey data from the China Household Income Project carried out by a Sino-US team of social scientists in 1988 and 1995 and confirm the above-mentioned trend of change. However, different authors have come to very different conclusions. The World Bank (1997) says ‘most of China's remaining absolute poverty is now concentrated in a number of resource-poor rural areas, primarily in the northern, northwestern, and southwestern provinces’. In contrast, Riskin (1994) says ‘a new, individualized kind of poverty may be developing within the core regions of agricultural China’. He continues ‘government anti-poverty efforts are regionally defined. If the
findings presented are accurate, most rural poor reside outside officially designated poor regions and anti-poverty measures do not reach most of them’. Riskin’s view is shared by some more recent studies with more comprehensive data (Ravallion and Jalan, 1999; Khan and Riskin, 2001; Stiglitz, 2002; Yao, Zhang and Hanmer, 2004).

Rozelle, Park, Benziger, and Ren (1998) employed county-level data to examine the sources and the effectiveness of targeted poverty investments in 43 poor counties of Shaanxi Province during the years 1986-91. According to their results, targeted investment funds allocated directly to households for agricultural activity have a significant and positive effect on growth, while investments in township and village enterprises or county state-owned enterprises do not have a discernible effect on growth. Investments in agricultural infrastructure do not positively affect growth rates in agricultural output, suggesting that other types of basic investments (e.g. roads and education) should receive higher priority.

Available studies on poverty in China provide useful insights for this proposed research, but most studies have not attempted to derive poverty lines using raw data except that by Khan (1999). However, as Khan’s study was based on a survey conducted in 1995, his calculated poverty line is not relevant and comparable with the current official poverty line. In addition, Khan only estimates one single poverty line for the whole country.

The above review on existing literature reveals some significant knowledge gaps for understanding rural poverty in China. The main gaps are identified below:
• There are no up-to-day poverty lines that can closely relate to the current living standards and prices. The official pan-country poverty line is not based on any scientific method of calculation. It is somewhat arbitrary and may be far too low.

• There are no regional-specific poverty lines.

• There is no direct information on the differences between the characteristics of poverty in the adverse regions and those in the normal regions (the use of Riskin’s poverty classification concepts, Riskin, 1994).

• There are few studies on China to decompose poverty into income change and distribution change.

• There are few studies on China to compare poverty distributions based on the poverty dominance theory.

• There is little attention paid to child and female poverty, which are important issues as many of able and young male adults are migrating out of the poor villages, leaving behind children and old age women.

The rural household survey data conducted by NBS at the provincial level will provide useful information to enable us to answer these questions. This research project is so designed that it will be able to close the knowledge gaps mentioned above (see the methodology below).

3. **Policy relevance**

The Chinese government is keen to eradicate poverty. A nationwide anti-poverty programme was first implemented in 1986 under the direction of the Anti-Poverty Leading Group of the State Council. The poverty alleviation budget has risen year after year but poverty has not been totally eliminated even based on the very modest poverty line set by the government.
To reduce poverty effectively, two essential problems need to be resolved. One is the realistic estimate of poverty and the other is to design an effective alleviation scheme. As shown in Table 1, since there are substantial differences between various estimates of poverty, it is important to find a realistic poverty line that can be recognised by the government and comparable by international standards. If the official estimate is too low, then, we need to prove that the absolute poverty line should be higher than the official poverty line. In addition, different regions should have a different poverty line. It is certainly inappropriate to use the same poverty line of 637 yuan per capita per year in Guangdong if it is already accepted in Gansu, as the costs of living in these two provinces are significantly different.

In the past, most poverty funds have been channelled to the so-called nationally or provincially designated poor counties, but many studies have shown that there are as many poor people living outside these counties as living inside. Hence, poverty alleviation funds should also be directed to the non-designated counties as well.

There are alternative ways that the government can help to reduce poverty, such as investments in infrastructure, direct subsidies, or investments in education and health, work-for-food programme and rural micro-finance, but which is the most effective method? Can the same method be adopted in different places, or should different places have different support mechanisms? All these questions are policy relevant. This research project will aim to find information to provide answers to these questions.
4. Methodologies

4.1 Data selection

There are many household surveys in China. The regular NBS rural household survey covering about 60,000 households is conducted every year for every province. The Ministry of Agriculture through its Rural Economic Research Centre has collected data based on about 20,000 households every year from all provinces since 1986. The Academy of Social Sciences in association with some overseas research institutes conducted two large household surveys in 1988 and 1995 covering about 8,000 households from 19 provinces. A third survey is currently underway.

All these large household surveys are useful for poverty study, but the most appropriate data should come from the provincial rural household surveys which cover more households than the national surveys. This research will use the rural household surveys in Inner Mongolia, Gansu and Hubei. The research team has managed to obtain some rural survey data from Hubei for the years 1997-2003. In each year, the data covers about 3,300 households, containing over 2,000 variables, which provide ample sources for the purposes of this research. Similar data will be collected from Inner Mongolia and Gansu once the project is started.

The first two provinces are among the poorest regions in China. They correspond to Riskin’s adverse regions. The third province is a middle income province and poverty in that region will be considered as a result of marginalisation based on Riskin’s argument. The selection of the sample provinces should provide a representative picture of rural poverty in China.

Apart from studying the poverty situation, we can also analyse the changes of poverty over time to see whether poverty is persistent on certain households, or it is transient between households, or the mix. In addition, the data collected from different types of provinces will allow us to compare the
characteristics of poverty between the adverse and normal regions. With aggregate regional data, it is possible to use a parametric approach or a poverty dominance approach to separate the effects of income changes and distributional changes on poverty variations over time. With household level data, it is also possible to use a logic model to study the effects of various household characteristics, such as sex, education, age, dependency ratio, household-type (farming dominant, or non-farming dominant) and location on the probability of poverty. All the analyses are important for government’s poverty alleviation policy.

4.2 Parametric and non-parametric analysis

- Deriving the rural poverty line

We intend to derive only one poverty line for each province. The estimation procedure is described as follows. We first derive the food poverty line, which is defined as the cost to secure a minimum calorie intake for one adult per day. According to the international standards, an intake of 2,100 calories per day per person will be used. In each province, all households will be ranked according to their mean incomes and divided into two groups. The low income group will be selected to derive the structure of their food consumption. This is because the consumption pattern of the low income group should be close to what the poor might choose to follow (Deaton, 1997). The first 10 main food items will be treated as the actual food bundle for the low income group. For each of the food items, their respective calorie equivalent can be found from the National Nutritional Institute. Once the food bundle is converted into calorie equivalents, it is possible to derive the equivalent physical bundle of food that can produce 2,100 calorie. From the price information, the value of this food bundle will be calculated, which becomes the food poverty line, denoted by $Z_F$. To derive the poverty line, Ravallion’s (1994) approach is followed by running the following regression.

$$S_i = \alpha + \beta \ln\left(\frac{X_i}{Z_F}\right) + \gamma \ln(n_i) \quad (1)$$
Where subscript $i$ denotes household, $S$ is the share of food expenditure in total expenditure, $X$ is total expenditure, $n$ is the number of household members. Once the parameters in equation (1) are estimated, the lower and higher poverty lines can be evaluated by the following formulae (see Ravallion, 1994, for a detailed explanation of lower and higher poverty lines).

The low line (denoted by $Z_L$) is:  $Z_L = Z_F (2-\alpha-\gamma \ln (n))$.

The high line (denoted by $Z_U$) is:  $Z_U = Z_F (1+\beta)/(\alpha+\gamma \ln (n)+\beta)$.

In both cases, it is necessary to specify the household size in order to determine the “basic non-food expenditure” per person. Just as the food poverty line is set with reference to the calorie requirement for an average person, the “basic non-food expenditure” is determined with reference to an average size household.

- Identify the main determinants of poverty

It is assumed that poverty at the aggregate regional level is mainly determined by two counteractive forces: change in mean income and change in distribution. If distribution is held unchanged, a rise in mean income will quickly lead to a reduction in poverty. If rising income is accompanied with rising inequality, poverty reduction will be slow, as it has been the case in China. The interactive effects of rising income and inequality on poverty reduction can be illustrated in Figure 1.
Initially, the distribution is denoted by $D_0$. If this distribution remains unchanged as mean income rises, the distribution curve shifts to the right and is denoted by $D_1$. The incidence of poverty is reduced from the area on the left-hand side of the poverty line underneath $D_0$, to the area on the left-hand side of the poverty line underneath $D_1$. However, if the distribution curve changes from $D_0$ to $D_1'$, rather than to $D_1$, the new poverty incidence will be the area on the left-hand-side of the poverty line underneath $D_1'$.

Figure 1 shows that the level of poverty can be determined by two key variables: inequality and mean income. With regional data for a number of years, we will be able to run the following regression to examine the effects of income change and distributional change on poverty. The simple regression model is shown in equation (2).

\[
poverty = f(mean \text{ income, inequality index}) \quad (2)
\]
At the household level, the probability of a household falling into poverty can be estimated in a logit model, which estimates the odds of a household falling into poverty as a function of a set of household level variables, including per capital income, sex of the household head, education attainment of the household head, age, location, the main production activity of the household, the number of children and old-aged people. The logit model can be presented in equation (3).

\[
\ln\left(\frac{p}{1-p}\right) = F(\text{sex, income, activity, age, education, location, dependency ratio}) \quad (3)
\]

Where \( p \) is the probability that a household falling into poverty.

- Calculation and decomposition of the Gini index

This is to derive the inequality index so that inter-regional inequality and group inequality can be identified. In addition, the decomposition of inequality by income sources can also be conducted. The calculation and decomposition of inequality by sub-population and income sources is useful to understand the causes of poverty.

The Gini coefficient (\( G \)) can be decomposed into three components: inter-group, intra-group and overlapped. The decomposition can follow the four-step approach proposed by Yao (1999).

**Step 1:** Calculating the Gini coefficient according to equation (3)

\[
G = 1 - \sum_{i=1}^{n} p_i (2Q_i - w_i), \quad (3)
\]

\[
Q_i = \sum_{k=1}^{i} w_k, \text{cumulative income share up to } i.
\]
Where \( G \) denote the Gini coefficient for the population where each household is ranked by per capita income \( (m_i, i = 1, 2, \ldots, n) \) in an ascending order. \( p_i \) and \( w_i \) are respectively the population and income share of the \( i \)th household. \( n \) is the number of households.

**Step 2:** If the sample is divided into \( S \) groups, the inter-group component, denoted by \( G_B \) can be derived from equation (4).

\[
G_B = 1 - \sum_{i=1}^{S} p_i (2Q_i - w_i) \tag{4}
\]

\( Q_i = \sum_{k=1}^{i} w_k \), cumulative income share up to \( i \).

Where \( p_i \) and \( w_i \) denote respectively the population and income shares of the \( i \)th group \( (i = 1, 2, \ldots, S) \) in the population. The explanation for equation (4) is akin to that for equation (3). The only difference is the definitions of \( p_i \) and \( w_i \). To derive \( G_B \), all the elements in equation (4) must be sorted in an ascending order of class mean incomes \( m_i \), such that \( m_1 \leq m_2 \leq \ldots \leq m_S \).

**Step 3:** The intra-group component, denoted by \( G_A \), can be derived from equation (5).

\[
G_A = \sum_{i=1}^{S} w_i p_i G_i \tag{5}
\]

As defined above, \( w_i \) and \( p_i \) are respectively the income and population shares of class \( i \) in the total population. \( G_i \) is the Gini coefficient for the \( i \)th sub-population. There are \( S \) Gini coefficients for \( S \) classes. The equation for \( G_i \) looks identical to equation (3) except that the calculation is now focused on a particular sub-population.

**Step 4:** The overlapped component \( G_O \) can be calculated based on equation (6).

\[
G_O = G - G_A - G_B \tag{6}
\]

If per capita total income can be divided into \( F \) number of sources, the Gini coefficient can also be decomposed by income source as shown in equation (7).

\[
G = \sum_{j=1}^{F} w_j C_j \tag{7}
\]
Where G is as defined above, \( w_f \) is the share of source f in total income and \( C_f \) is the so-called concentration coefficient (pseudo Gini). \( C_f \) can be calculated using the same formula as equation (3), but the elements in (3), \( w_i \)'s, have to be replaced by \( w_{fi} \)'s, and \( w_{fi} \) is defined as the share of the \( i \)th household in the total income of source f. Before calculation, all households have to be sorted by per capita income of source f in an ascending order (for more detailed explanation, see Yao, 1999).

- Poverty dominance analysis

Following Duclos and Araar (2003), we will also attempt to conduct analysis on poverty dominance. This is particularly useful if we want to examine whether poverty increases over a particular time period, or whether the poverty situation in one region is worse than in another.

Comparison of two poverty distributions, denoted by A and B can be expressed below:

\[
\Delta P(z) = P_A(z) - P_B(z) = \int_{0}^{z} [\pi(Q_A(p); z) - \pi(Q_B(p); z)] dp = \int_{0}^{z} \pi(y; z) \Delta f(y) dy
\]

where \( P(z) \) denotes poverty indexes, \( Q(p) \) the contribution of individuals to overall poverty, \( z \) an artificially defined poverty line, \( p \) population distribution, \( y \) per capital income (or consumption), \( \pi(Q(p), z) \) population poverty density function, \( \pi(y; z) \) income poverty density function, \( \Delta f(y) \) the difference in the densities of income (Duclos and Araar, 2003, p118). To check whether the above difference in poverty indices is positive will involve the use of stochastic dominance curves \( D^s(z) \), for orders of dominance \( s = 1,2,3, \ldots \). \( D^1(z) \) is simply the proportion of individuals underneath the poverty line \( z \). The higher order curves are iteratively defined as

\[
D^s(z) = \int_{0}^{z} D^{s-1}(y) dy
\]

For the popular FGT poverty indices, \( D^s(z) = \frac{1}{(s-1)!} P(z; \alpha = s-1) \). Hence, the dominance curve of order 1 is simply the average poverty gap for different poverty lines. The \( s^{th} \) order poverty dominance test can be carried out on the following general formulation:
\[ P_A(z) - P_B(z) \geq 0 \text{ for all } P(z) \in \prod^s(z^+) \]
\[ \text{iff } D^s_A(y) \geq D^s_B(y) \text{ for all } y \in [0, z^+] \]  

(10)

- Decomposition of poverty variation in growth and redistribution components.

Income growth tends to have a pull effect but the worsening of income distribution a push effect on poverty. In rural China, although per capita incomes have risen but income inequality has also increased. The changes of poverty over time, across regions and between different sub-groups can be explained by two main components: income growth and redistribution. The decomposition method discussed by Duclos and Araar (2003) can be used for this purpose. The easiest decomposition approach is to use the normalized FGT (Foster, Greer and Thorbecke, 1984) indices \( \bar{P}(z; \alpha) = \mathcal{F} \left( \frac{g(p; z)}{z} \right)^\alpha dp \), where \( z \) is poverty line and \( \alpha \geq 0 \) an ethical parameter. Datt and Ravallion (1992) uses the initial distribution \( A \) as a reference ‘anchor point’ for the assessment of the impact of mean-income and distribution on poverty. The change in poverty between two distributions \( A \) and \( B \) can be expressed as the sum of a growth (change in mean income) effect and of a distribution (change in inequality) effect, plus a residual term. An alternative way uses the posterior distribution \( B \) as the reference distribution for assessing the growth and redistribution effects.

Clearly, an appropriate way between these two alternative decomposition methodologies is to measure the growth effect as the average of the two growth effects, and likewise to measure the redistribution effect as the average of the two redistribution effects. The advantage of this is that the error term can be eliminated, as the error terms of each of the two alternative decompositions sum to zero. This method is in fact what would be given by the use of the Shapley value to perform growth-
redistribution decomposition. The decomposition can be shown in equation 11, where $\mu$ is population mean income, $z$ and $\alpha$ are defined above (Duclos and Araar, 2005).

$$
\bar{P}_B(z, \alpha) - \bar{P}_A(z, \alpha) = \frac{1}{2} \left( \bar{P}_A \left( \frac{z\mu_A}{\mu_B}, \alpha \right) - \bar{P}_A(z, \alpha) \right) + \frac{1}{2} \left( \bar{P}_B(z, \alpha) - \bar{P}_B \left( \frac{z\mu_B}{\mu_A}, \alpha \right) \right) \\
\leftarrow \text{Shapley redistribution effect} \rightarrow \\
+ \frac{1}{2} \left( \bar{P}_B \left( \frac{z\mu_B}{\mu_A}, \alpha \right) - \bar{P}_A(z, \alpha) \right) + \frac{1}{2} \left( \bar{P}_B(z, \alpha) - \bar{P}_A \left( \frac{z\mu_A}{\mu_B}, \alpha \right) \right) \\
\leftarrow \text{Shapley growth effect} \rightarrow
$$

(11)

The calculation and decomposition of poverty dominance (equation 10) and poverty variation (equation 11) can be easily conducted in DAD, a computer package developed by Duclos, Araar and Fortin (2004).

5. Related project experiences and expected capacity building

China Agricultural University is one of the top 20 universities and the best agricultural university in the country. The College of Economics and Management is the strongest economics school among all the agricultural universities. Xiuqing Wang (proposed team leader) has worked as a team member of an international research project organised by the Food and Agricultural Organisation (FAO) of the United Nations, on ‘The role of agriculture in poverty alleviation in China’ (FAO, 2002-03). Xian Xin (proposed team member) has recently completed a research project, ‘The impact of agricultural trade liberalisation on rural poverty in China’, financed by the Ford Foundation in Beijing (2002-2004). These two international projects have led to some publications and papers presented to different international conferences (Tian, Wang and Ke, 2003; Mao and Xin, 2003; Liu, Xin, and Mao, 2002).

The team members of this proposed project include three young female Ph.D candidates and two senior faculty members, with help from a resource person, who is a visiting professor of the
institution. It is expected that the project will produce some high quality research papers for both Chinese and English academic journals. In addition, the project will greatly improve the team working ability of the institution, and trains the young members to become competent and independent researchers. The overall research capacity of the institution will be significantly improved by this research project.

The two senior faculty members with assistance from the resource person will be responsible for the design and implementation of the project. They are also responsible for the specification of econometric and mathematical models, analysis of computation results and writing up of research reports and papers. The junior researchers will be responsible for data collection, processing and analysis. They will also be responsible for model estimation and sensitivity analysis, literature review and writing of the draft versions of reports and papers. It is expected that by the end of the research project, all the team members will be able to use the skills and techniques learned from the project, including data collection, processing and analysis, modelling and report/paper writing skills in both Chinese and English. All team members will be able to use computer packages such as DAD, SAS, SPSS or Stata for their future research work. This will greatly enhance the research capacity of the research institution. The household survey dataset will also be used for future research projects.

6. Dissemination of research results

This research will produce some research reports and discussion papers initially and some high quality journal articles in a later stage. Journal articles are mainly intended for English and Chinese journals. Papers will also be presented to different international and national conferences. Apart from the conferences organised by PEP, we can also present our papers in the Chinese Economic Association (UK) annual conference in the UK and China, the Allied Social Sciences of America (ASSA) annual conference in the US, the International Association of Agricultural Economics, the Chinese Agricultural Economics Association annual conference in China. Research reports can also
be disseminated to various governmental organisations, such as the Ministry of Agriculture, the Leading Group of Anti-Poverty of the State Council, the Ministry of Civil Affairs and the regional governments at the provincial and county levels.

6. Work plan

The main task of this research is the collection and processing of rural household survey data. The first three months will be used for data collection from the three selected provinces. The next three months will be used for data analysis. The interim report will be produced in month 5 or month 6 about the progress of data collection and analysis. After the interim report, another three months will be used for econometric modelling, the calculation of the Gini index and decomposition, poverty dominance analysis and decomposition of poverty indexes. The last three months will be devoted to report/paper writing.

7. References


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